CLAIMS

1. Metal fin for tube heat exchanger (2), forming an indirect exchange surface intended to increase heat transfer between the tubes (2), in which a fluid circulates, and the air circulating between the tubes and along the surface of the fin in a determined direction of flow, the fin comprising a series of mounting collars (5) for the tubes (2) and means (7) for increasing heat exchanges between the air and the fin, characterized in that the means for increasing heat exchanges consist of:

- at least diverting conformations (10) each arranged upstream of an aperture (3) when considering the direction of air flow (F) to force the air to pass either side of said aperture,
- and diverting conformations (11) each arranged, when considering the direction of air flow (F), downstream of an aperture (3) belonging to a row to force the air to pass either side of apertures belonging to a subsequent row, the upstream (10) and downstream (11) diverting conformations of two superimposed apertures (3) belonging to one same column extending along a determined length so that substantially rejoin at the plane of extension (P) of staggered apertures belonging to an intermediate row with respect to the upstream and downstream rows to which the superimposed apertures belong.

2. Metal fin as in claim 1, characterized in that the upstream (10) and downstream (11) diverting conformations are sized so that at air velocities of between 1 and 5 m/s the fin, per streamline, has an air pressure loss of between 0.3 and 4 mm WC (water column) respectively and an airside thermal resistance of between 0.016 and 0.008 m^2 K/W respectively.

3. Metal fin as in claim 1 or 2, characterized in that the upstream diverting conformation (10) and the downstream diverting conformation (11) for one same aperture (3) have mirror symmetry with respect to the plane of extension (P) perpendicular to the direction of air flow (E).

4. Metal fin as in claim 3, characterized in that the upstream diverting conformation (10) and the downstream diverting conformation (11) for one aperture (3) are increasingly inclined from the distal edge (12) to the proximal edge (13) of each conformation with respect to the aperture and in the direction of the air flow.

5. Metal fin as in claim 4, characterized in that the width of each diverting conformation (10, 11) increases from its distal edge (12) to its proximal edge (13).

6. Metal fin as in claim 5, characterized in that each diverting conformation (10,11) has a substantially semi-elliptical contour.

7. Metal fin as in claim 4 or 5, characterized in that each upstream (10) and downstream (11) conformation has a curved profile in a transverse direction with respect to the direction of flow (E).

8. Metal fin as in claim 4 or 5, characterized in that each diverting conformation (10,11) is extended from its proximal edge (13) in the direction of the aperture (3) by a deflecting sidewall (15).

9. Metal fin as in claim 8, characterized in that in the direction of flow (E) the measurement of the deflecting sidewall (15) is smaller than the measurement of the associated diverting conformation (10,11).

10. Metal fin as in any of claims 1 to 9, characterized in that each diverting conformation (10,11) projects on one side of the fin and is recessed on the other side of the fin.

11. Heat exchanger characterized in that it comprises a series of metal fins each conforming to any of claims 1 to 10 and mounted on tubes (2) in which a fluid circulates.